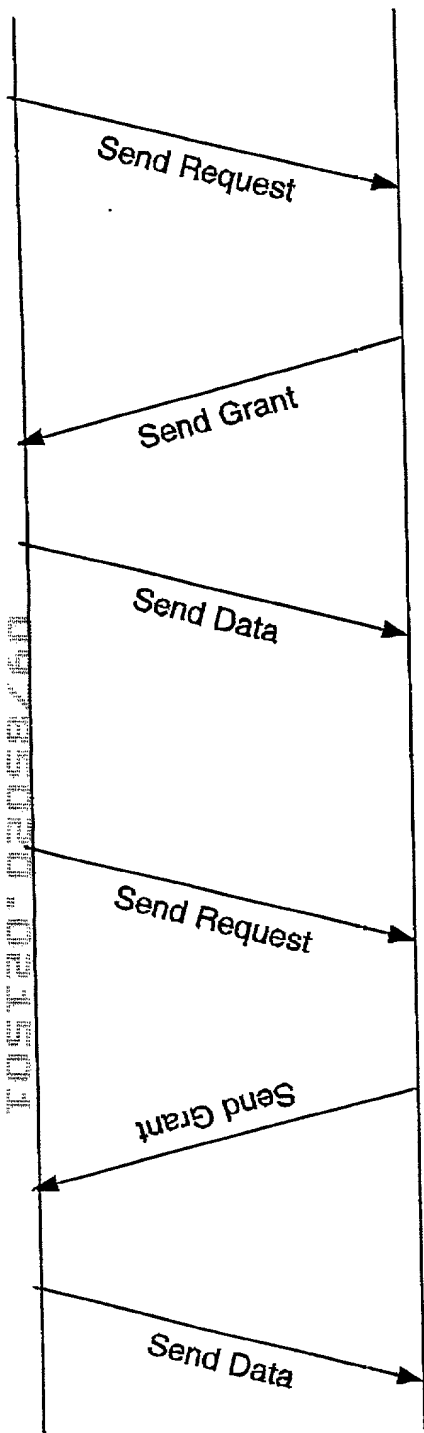


FIG. 1

CM

CMTS

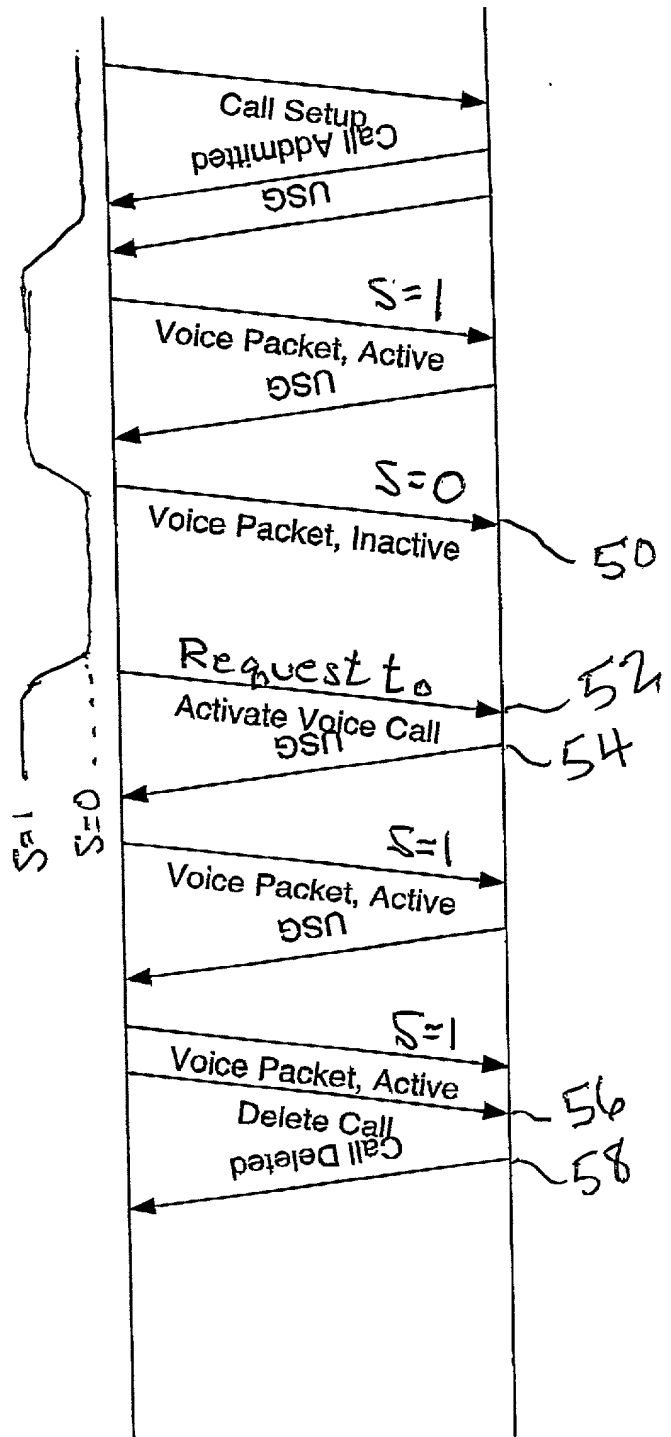


Data Service

FIG. 2A

CM

CMTS



Voice Service

FIG. 2B

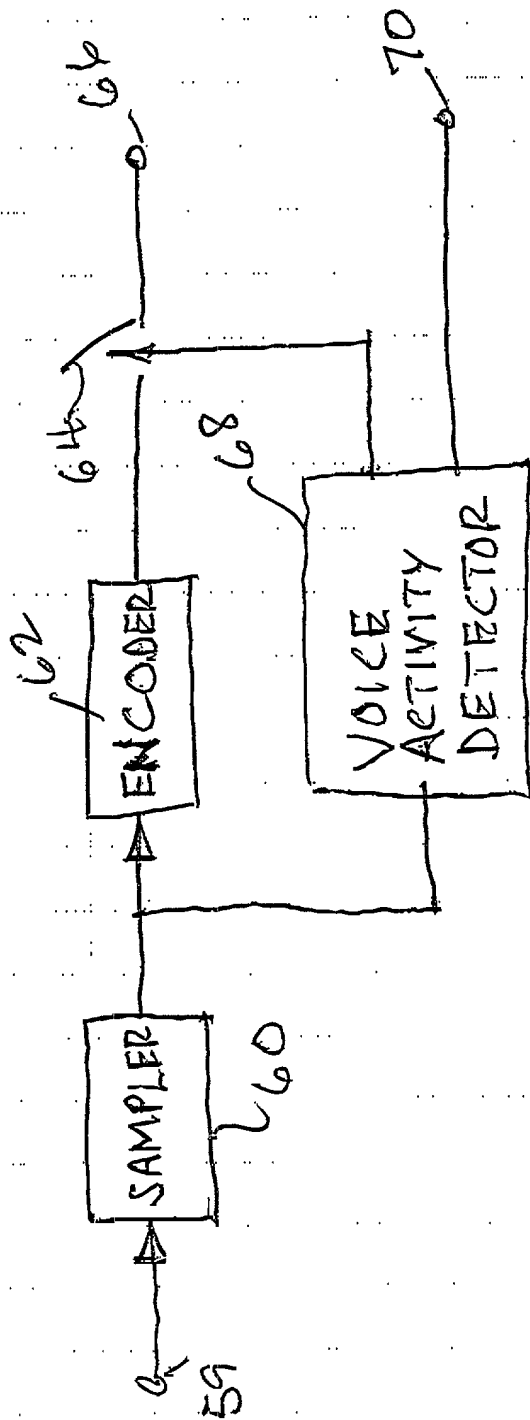


FIG. 3

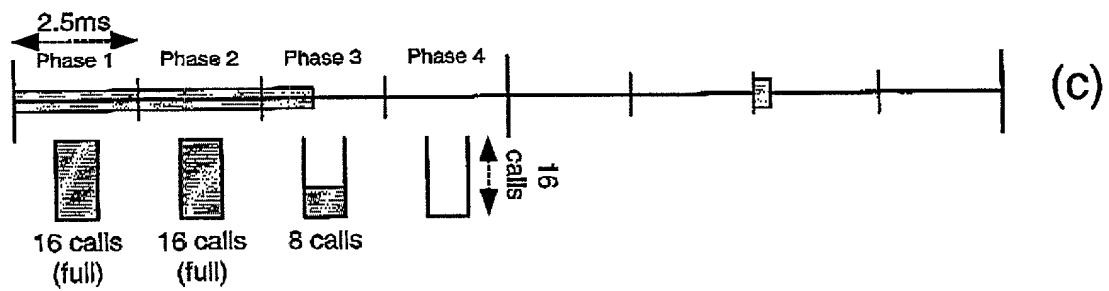
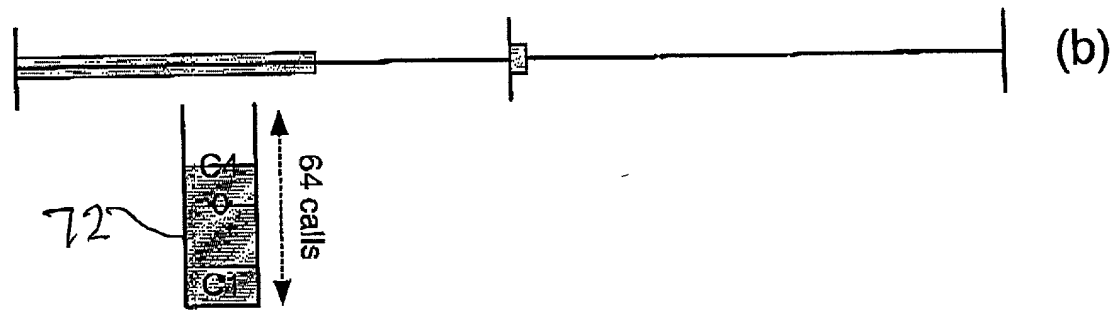
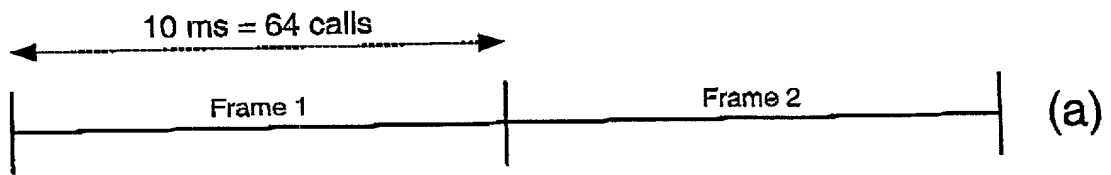
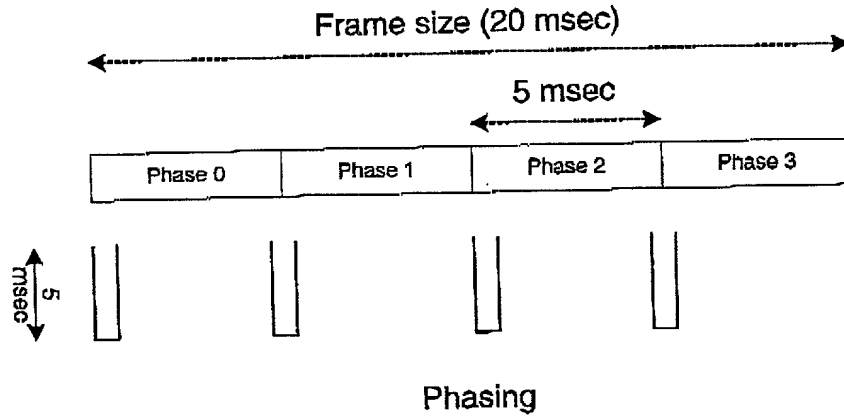
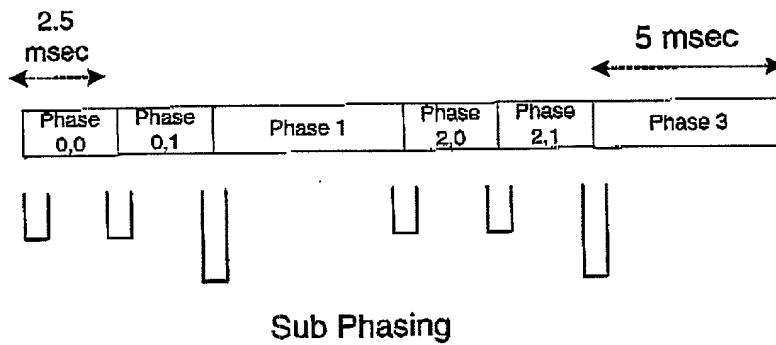


FIG. 4



Voice frame

FIG. 5A



Voice frame

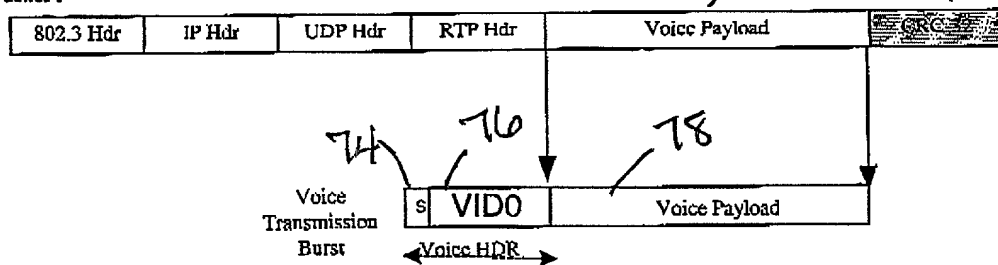
FIG. 5B

FIG. 5C

- Call 1 : CM1, VID0: 5ms, 16 Kbps = 2 MS (1:0)
- Call 2 : CM2, VID0: 10ms, 32 Kbps = 4 MS (2:0)
- Call 3 : CM3, VID0: 20ms, 32 Kbps = 7 MS (3:0)
- Call 4 : CM4, VID0: 20ms, 32 Kbps = 7 MS (4:0)
- Call 5 : CM1, VID1: 10ms, 16 Kbps = 3 MS (1:1)
- Call 6 : CM2, VID1: 10ms, 16 Kbps = 3 MS (2:1)

Voice
Packet 1

FIG. 6A



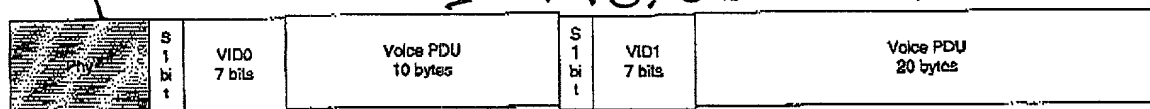
Mapping VoIP Packets into Voice PDUs

80

81a

FIG. 6B

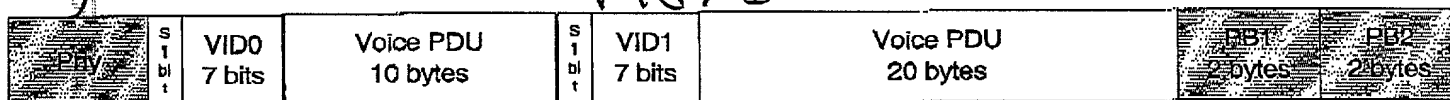
8tb



Concatenation of two voice channels of different rates

FIG. 6C

82



Concatenation of voice channels and piggybacking requests

2025-01-20 10:02:00

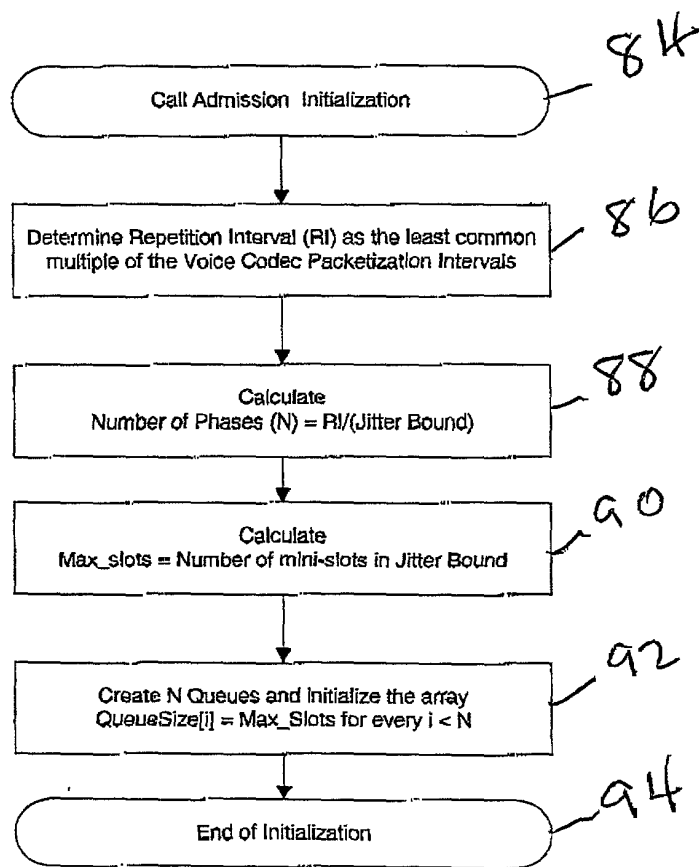


FIG. 7

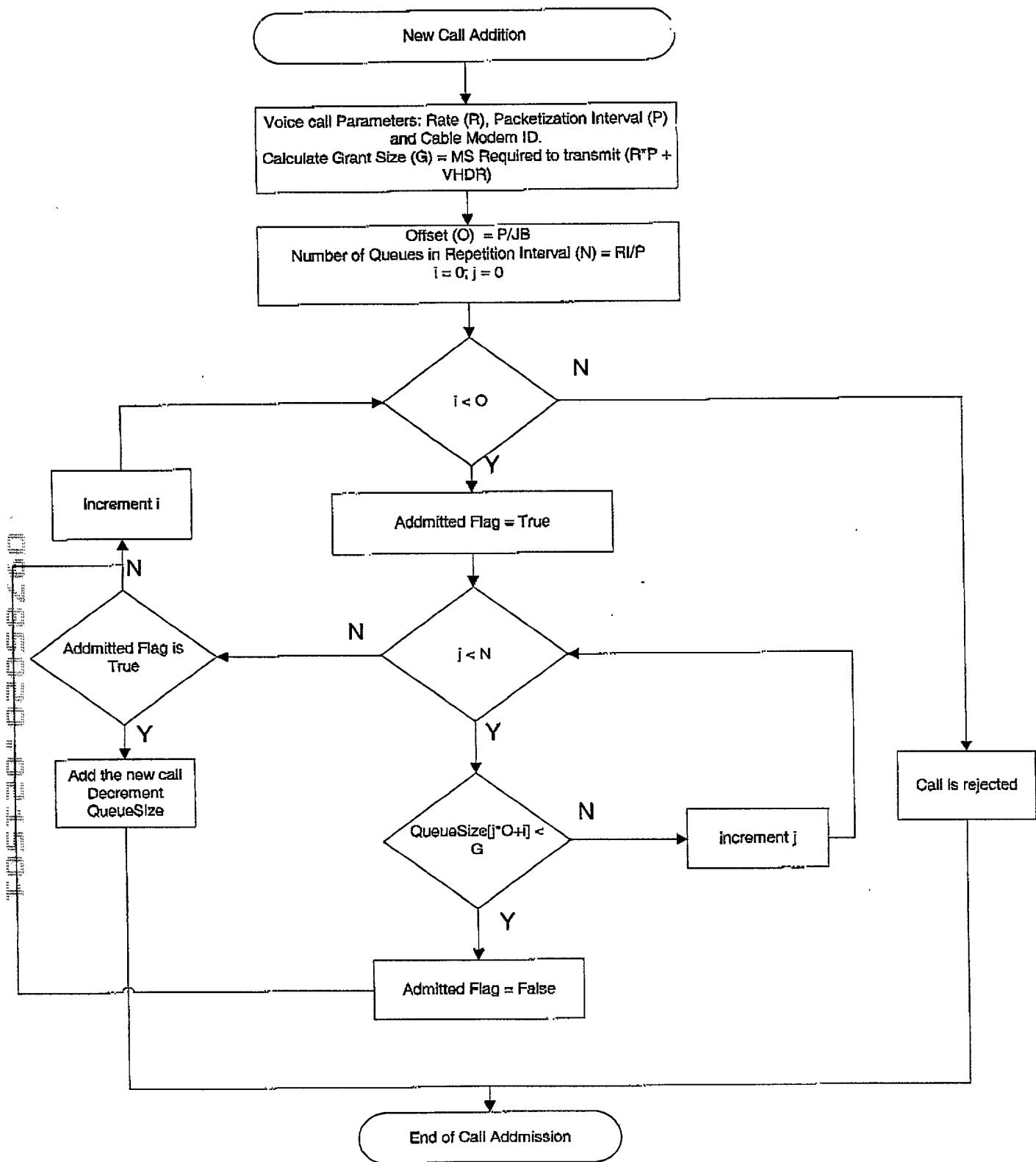
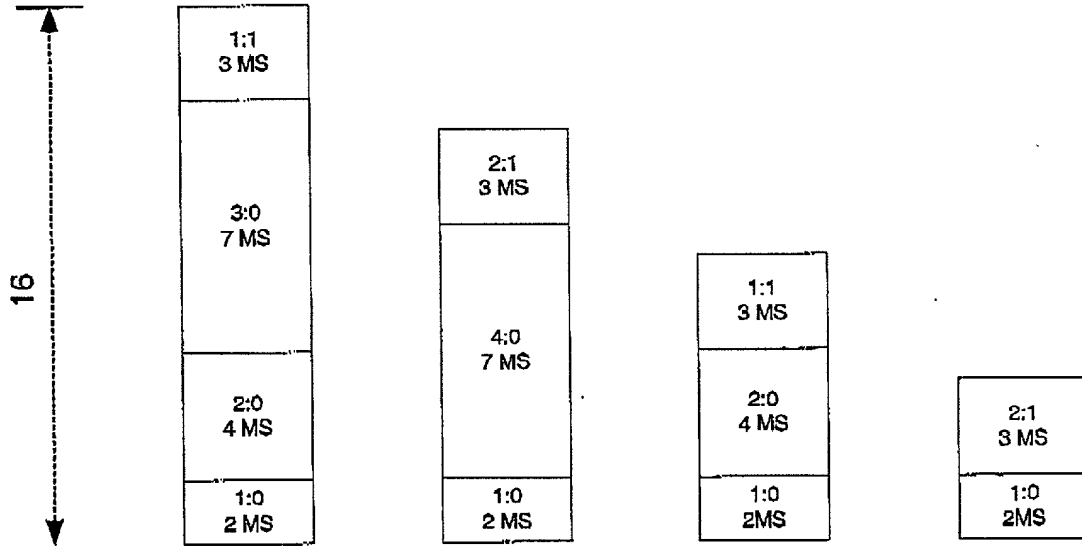
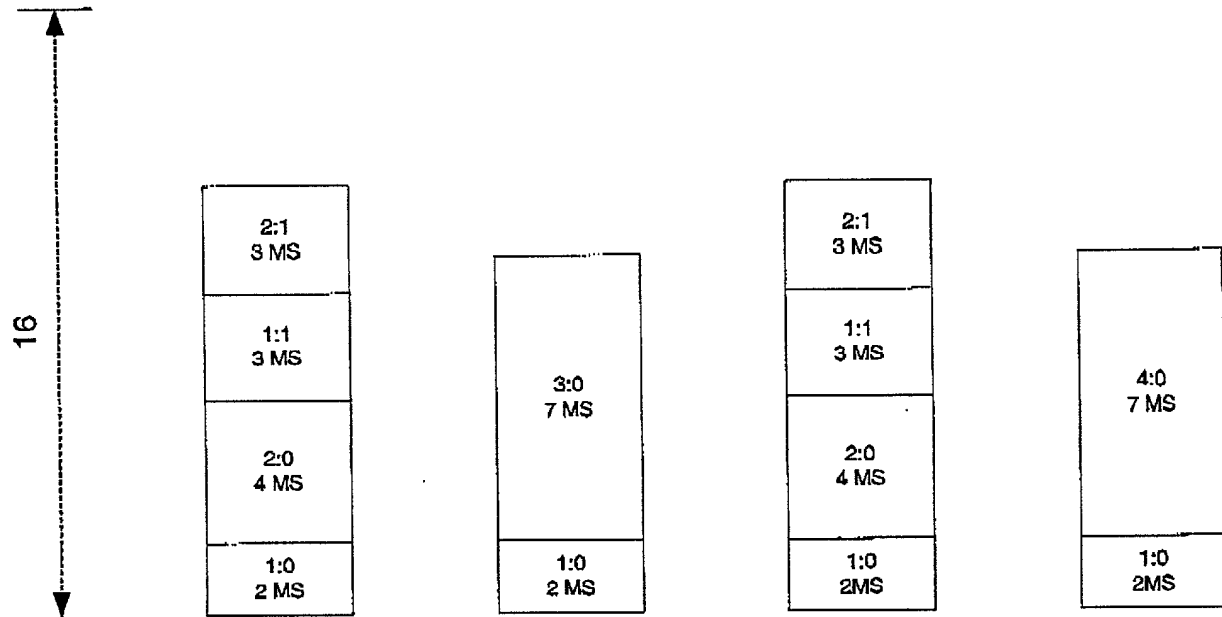


FIG. 8



Call Admission: Unbalanced

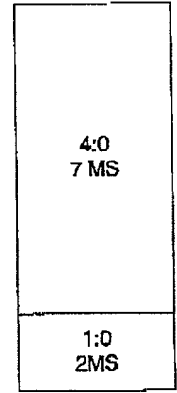
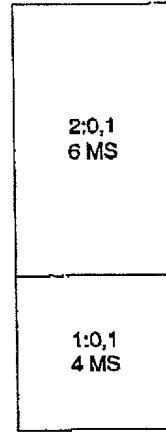
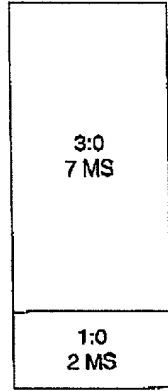
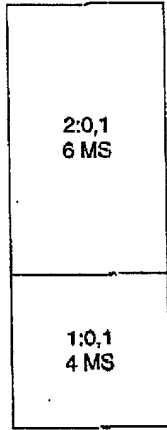
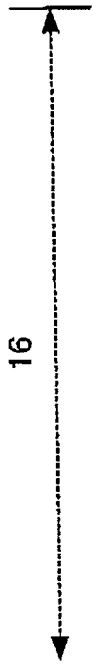
FIG. 9



Call Admission: Balanced

FIG. 10

FIG. 11

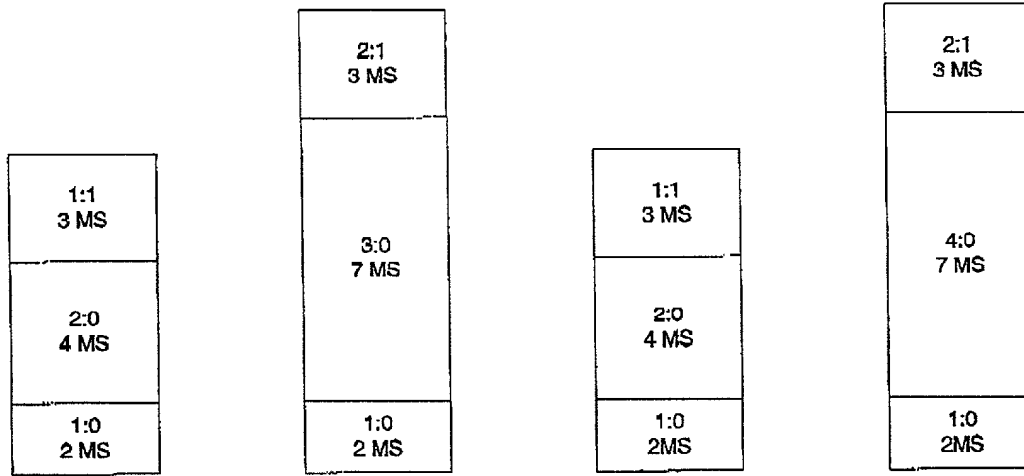


Call Admission: Balanced with Concatenation

FIG. 11

FIG. 12

16



Call Admission: Balanced and Distributed CM Allocation

FIG. 12

(Periodic) Unsolicited grant service (UGS)

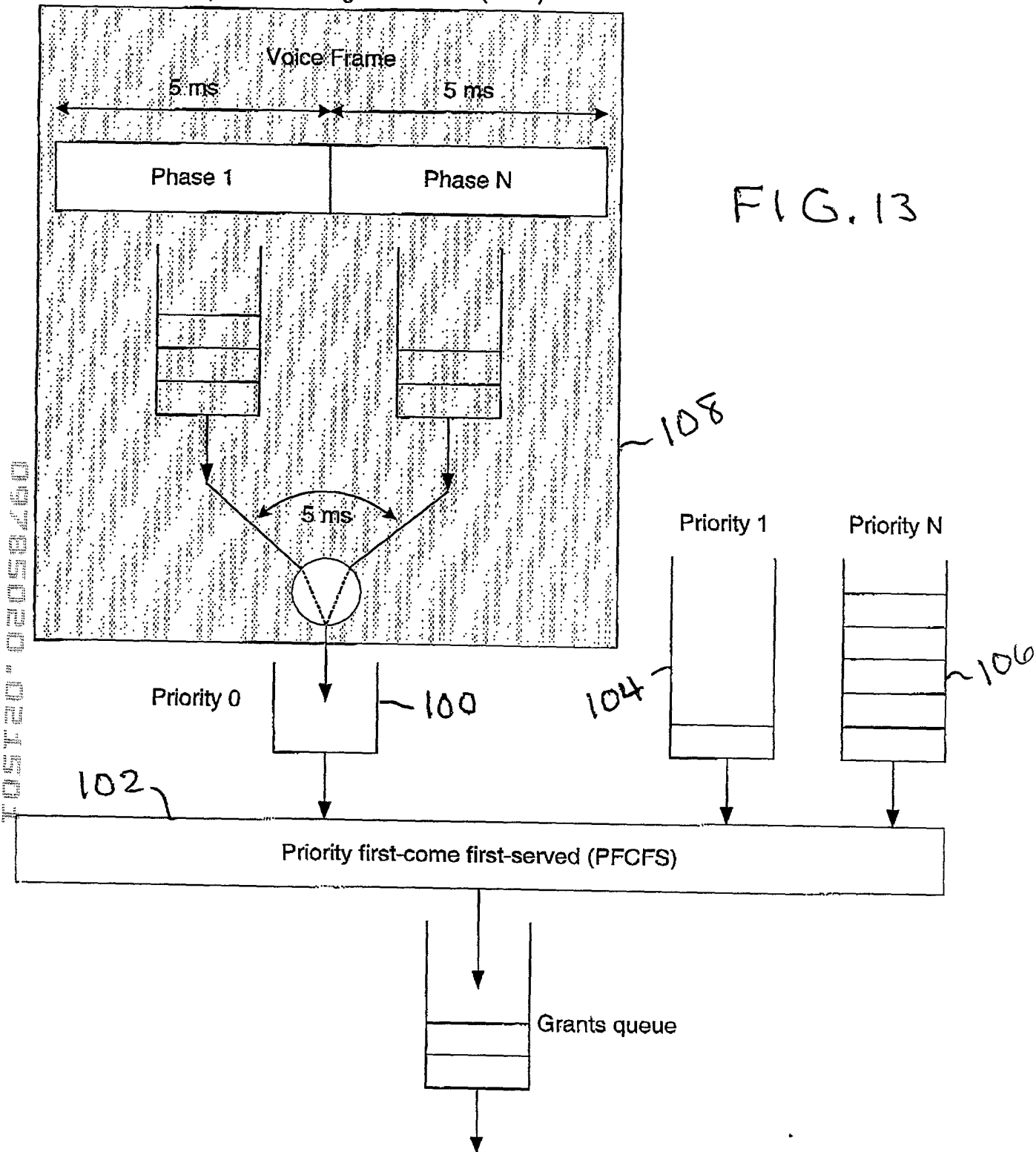
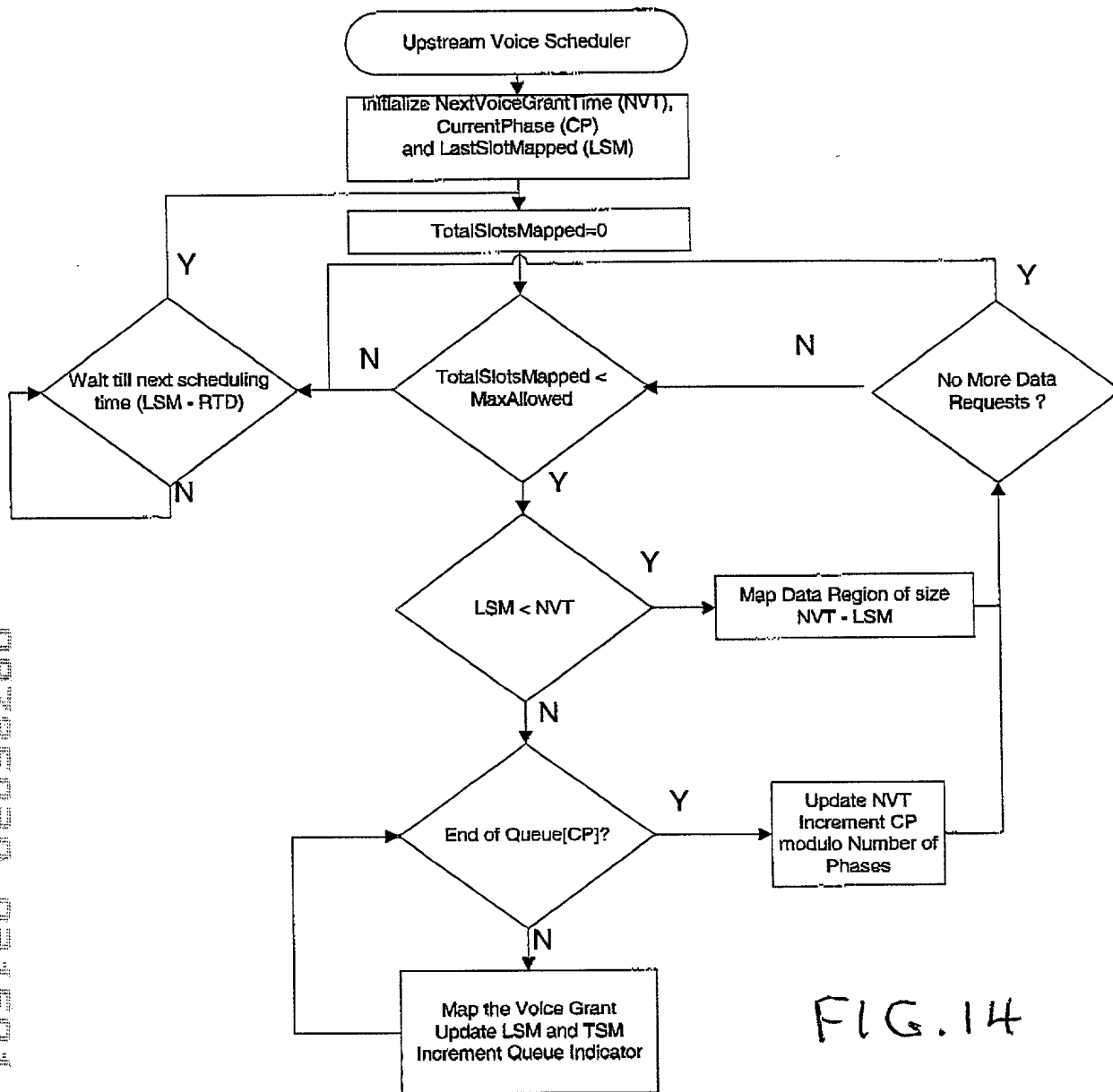
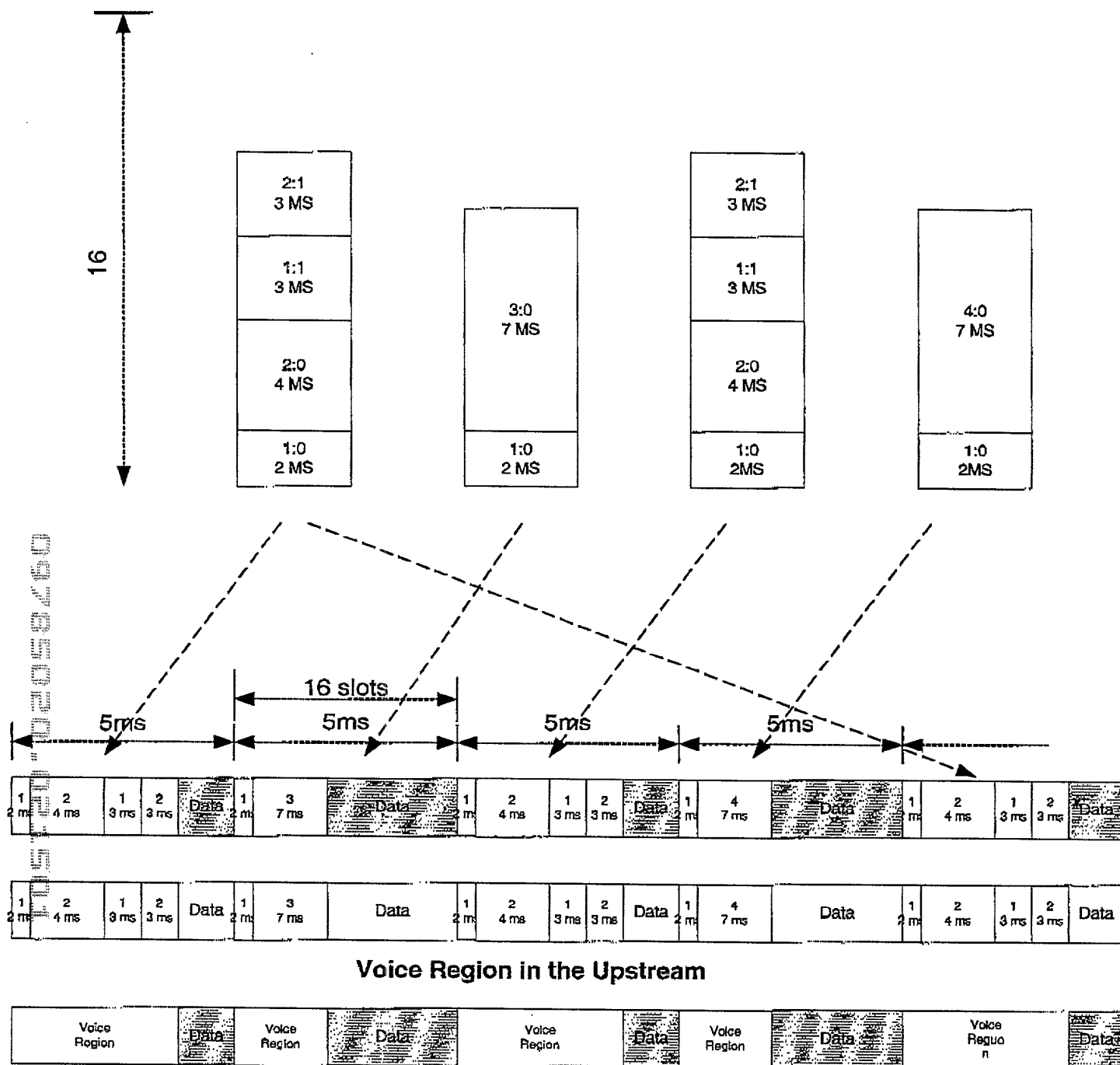


FIG. 13

[illegible]



Voice Scheduling : Mapping Voice State into Upstream Grants

FIG. 15

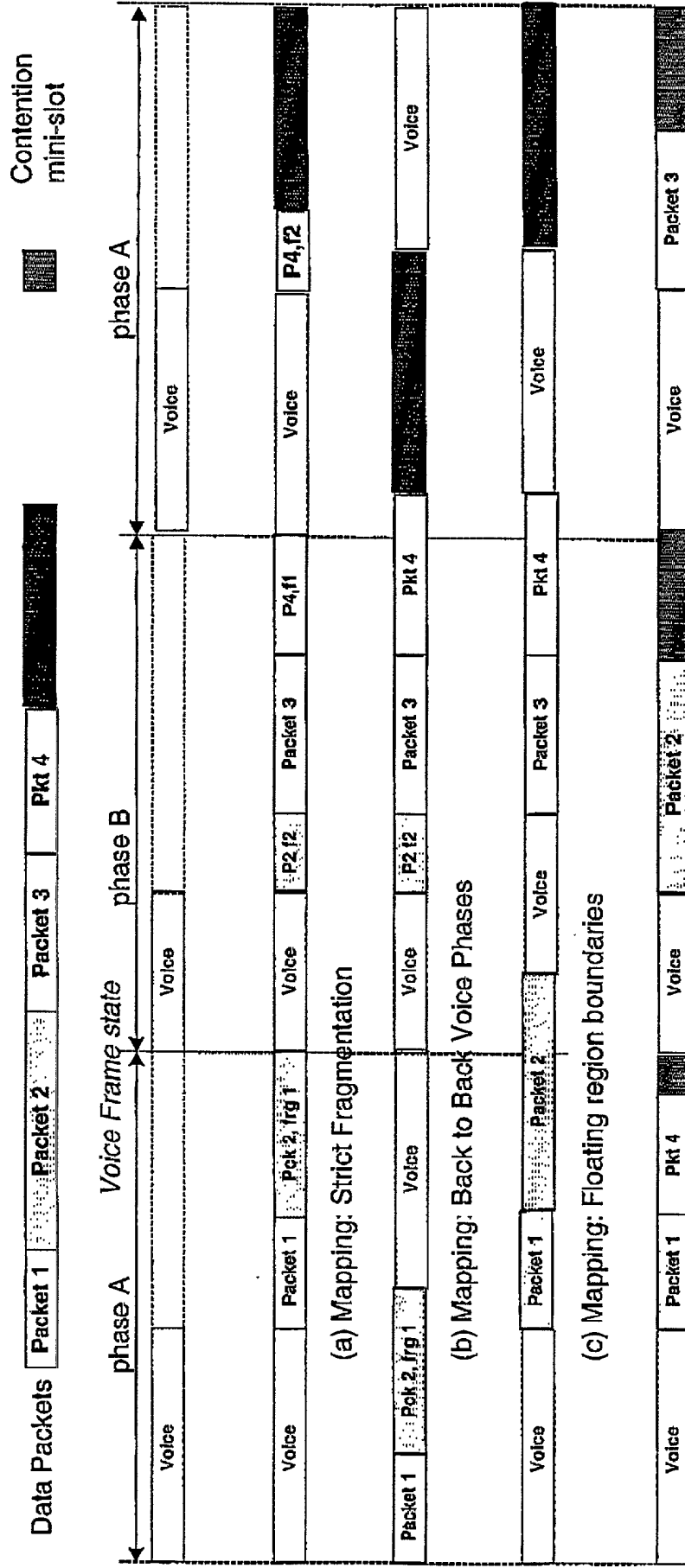


FIG. 16

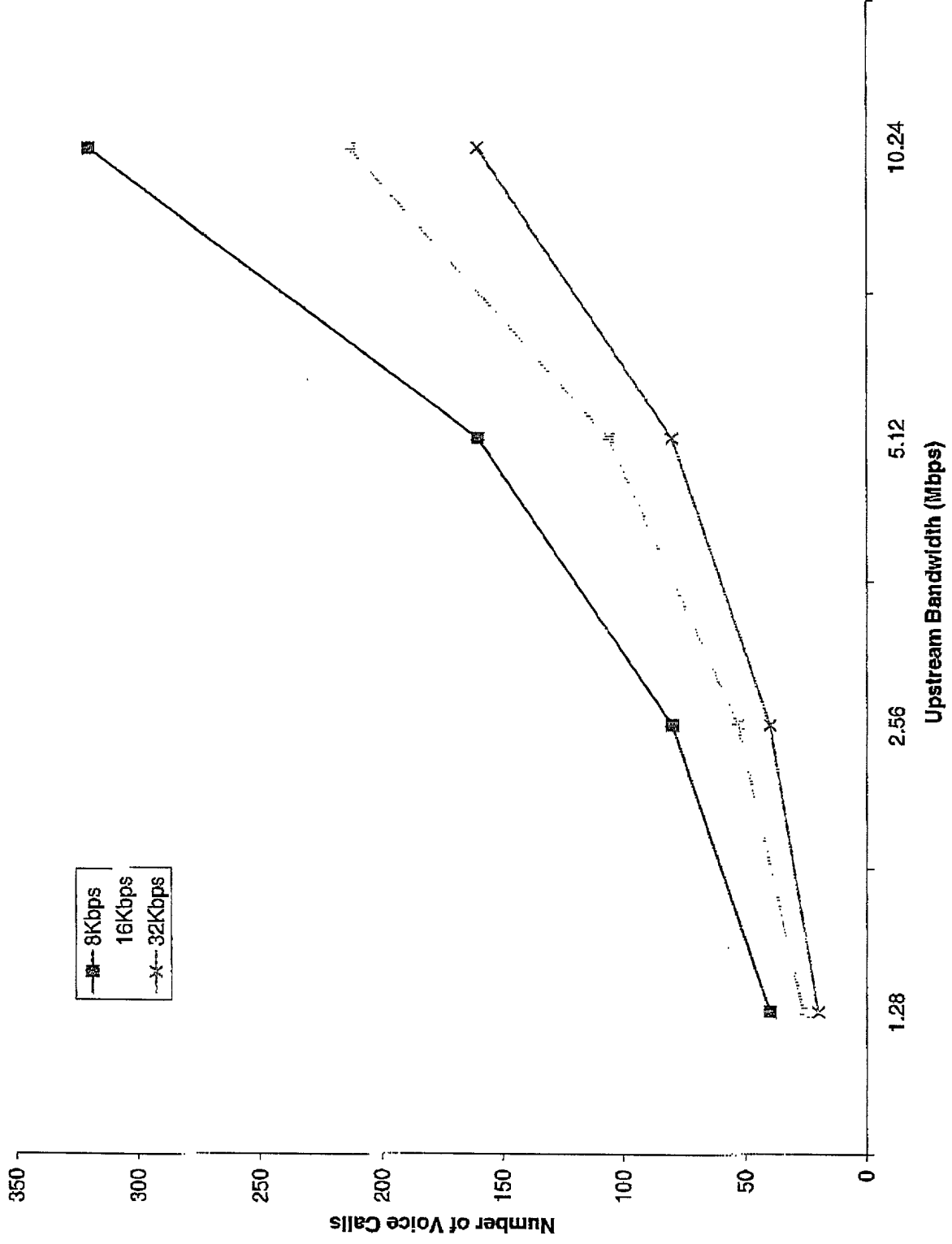


FIG. 17

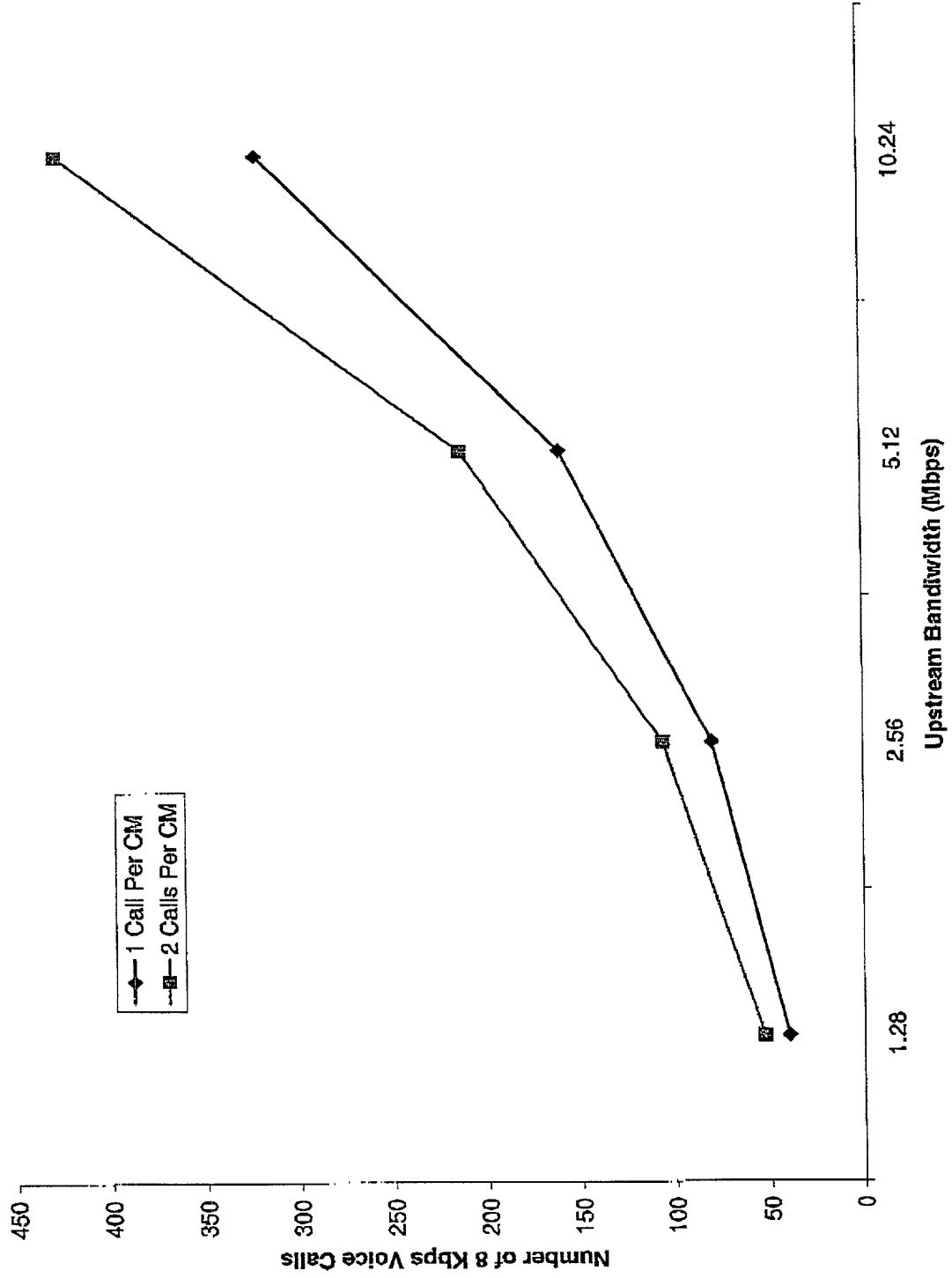
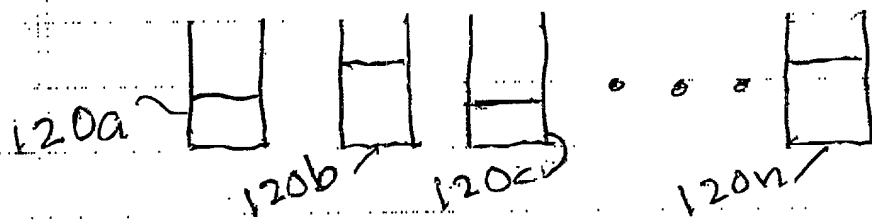
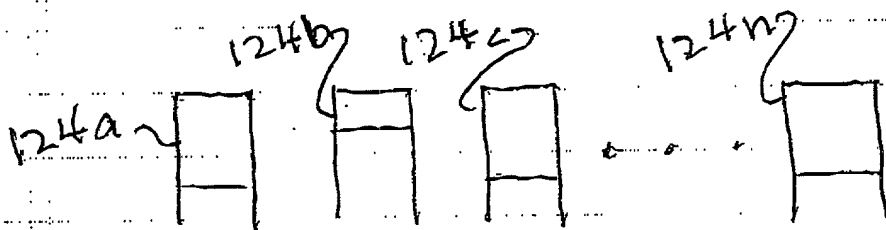
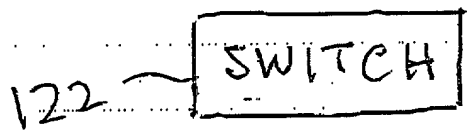


FIG. 18



INPUT
QUEUES



OUTPUT
QUEUES

FIG. 19